IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the

application:

1. (Currently amended) A computer implemented method comprising:

receiving, by the computer, a first request to create a three-dimensional virtual

reality scene;

receiving a second request to add at least two media objects to the virtual

reality scene, wherein each media object is two-dimensional;

associating each media object with a series of two-dimensional views of the

media object from various orientations and locations in three dimensional space;

preparing a translation vector and a rotation matrix for each of the media

objects, the rotation matrix and the translation matrix defining an orientation and a

location of each of the media objects in the virtual reality scene, wherein each two-

dimensional view of each media object defines a different orientation of each media

object;

building the virtual reality scene for display, wherein

the virtual reality scene combines the at least two media objects and

includes data about each media object and a relationship of each media object

to the scene including layering data to be used to determine foreground and

background relationships between the media objects are included within the

virtual reality scene, and

the virtual reality scene is translatable and rotatable, and wherein translating and rotating the virtual reality scene results in changing the respective two-dimensional views of the media objects, including the layering

of the media objects within the scene, to give the appearance of the media

objects having three dimensional qualities.

2. (Previously presented) The computer implemented method of claim 1 further

comprising:

receiving a third request to manipulate the virtual reality scene; and

manipulating the virtual reality scene.

3. (Previously presented) The computer implemented method of claim 2 further

comprising:

updating the translation vector and rotation matrix for each of the media

objects responsive to receiving the third request to manipulate the scene.

4. (Previously presented) The computer implemented method of claim 2 wherein

the third request to manipulate is received from an application program.

5. (Previously presented) The computer implemented method of claim 2 wherein

the third request to manipulate originates from a user.

6. (Previously presented) The computer implemented method of claim 2 wherein

the third request to manipulate is one of a pan request, a zoom request, and a tilt

request.

7. (Previously presented) The computer implemented method of claim 2 further

comprising:

calling one or more library functions of a plurality of library functions to

manipulate the media objects.

8. (Previously presented) The computer implemented method of claim 7 wherein

the library functions are included in an operating system enhancement application

program interface.

9. (Cancelled)

10. (Previously presented) The computer implemented method of claim 1 further

comprising:

receiving a selection of a first media object of the media objects within the

scene.

11. (Previously presented) The computer implemented method of claim 10 further

comprising:

receiving a third request to manipulate the first media object.

12. (Previously presented) The computer implemented method of claim 11 further

comprising:

updating the translation vector and rotation matrix for the first media object

responsive to receiving the third request to manipulate the first media object.

13. (Previously presented) The computer implemented method of claim 11

wherein the third request to manipulate originates from a user.

14. (Previously presented) The computer implemented method of claim 11

wherein the third request to manipulate is one of a pan request, a zoom request, and

a tilt request.

15. (Previously presented) The computer implemented method of claim 11 further

comprising:

calling one or more library functions of a plurality of library functions to

manipulate the media objects.

16. (Previously presented) The computer implemented method of claim 15

wherein the library functions are included in an operating system enhancement

application program interface.

17. (Cancelled)

18. (Previously presented) The computer implemented method of claim 1 wherein

each media object further comprises:

a soundtrack associated with each media object such that the soundtrack is to

be played when the media object is selected by a user.

- 5/29-

- 19. (Previously presented) The computer implemented method of claim 18 wherein the soundtrack is to be played responsively to movement of the associated media object.
- 20. (Previously presented) The computer implemented method of claim 1 further comprising:

receiving a designation of a soundtrack to be played in conjunction with the displaying of the scene.

- 21. (Previously presented) The computer implemented method of claim 20 wherein the soundtrack is played by calling one or more library functions of a plurality of library functions.
- 22. (Previously presented) The computer implemented method of claim 1 wherein displaying comprises:

calling one or more library functions of a plurality of library functions to display the media objects.

23. (Currently amended) A computer implemented method comprising: storing, by the computer, a first function to allow an application program to

create a three-dimensional virtual reality scene, wherein the scene is to be able to be translated and rotated;

receiving a request for execution of the first function;

storing a second function to allow the application program to add at least two media objects, wherein each media object is two-dimensional, to the virtual reality

Inventor(s): Xiaochun Nie, et al. Examiner: Zhou, Ting Application No.: 10/022,151 - 6/29-Art Unit: 2173

scene and to associate each media object with a series of two-dimensional views of the object from various orientations and locations in three dimensional space, responsive to the request to execute the first function, wherein the virtual reality scene combines the media objects and includes data about each object and a relationship of each media object to the scene including layering data to be used to determine foreground and background relationships between the media objects, wherein each two-dimensional view of each media object defines a different orientation of each media object; and

receiving a request for execution of the second function; and preparing a translation vector and a rotation matrix for each of the media objects, the rotation matrix and the translation matrix defining an orientation and a location of each of the media objects in the virtual reality scene responsive to the request to execute the second function, and wherein translating and rotating the virtual reality scene results in changing the respective two-dimensional views of the media objects, including the layering of the media objects within the scene, to give the appearance of the media objects having three dimensional qualities.

24. (Previously presented) The computer implemented method of claim 23 further comprising:

storing a third function to render the virtual reality scene and the media objects in the virtual reality scene;

receiving a request for execution of the third function; and rendering the virtual reality scene responsive to receiving the request to execute the third function.

Inventor(s): Xiaochun Nie, et al.

Application No.: 10/022,151

- 7/29
Examiner: Zhou, Ting
Art Unit: 2173

25. (Previously presented) The computer implemented method of claim 24 further

comprising:

receiving a request from a user to manipulate the virtual reality scene.

26. (Previously presented) The computer implemented method of claim 25 further

comprising:

updating the translation vector and rotation matrix for each of the media

objects responsive to receiving the request to manipulate the virtual reality scene.

27. (Previously presented) The computer implemented method of claim 25

wherein the request to manipulate is one of a pan request, a zoom request, and a tilt

request.

28. (Previously presented) The computer implemented method of claim 25 further

comprising:

calling one or more library functions of a plurality of library functions to

manipulate the media objects.

29. (Previously presented) The computer implemented method of claim 28

wherein the library functions are included in an operating system enhancement

application program interface.

30. (Currently amended) A system comprising:

means for receiving a first request to create a three-dimensional virtual reality

scene;

Examiner: Zhou, Ting Art Unit: 2173 means for receiving a second request to add at least two media objects to the virtual reality scene, wherein each media object is two-dimensional;

means for associating each media object with a series of two-dimensional views of the object from various orientations and locations in three dimensional space;

means for preparing a translation vector and a rotation matrix for each of the media objects, the rotation matrix and the translation matrix defining an orientation and a location of each of the media objects in the virtual reality scene, wherein each two-dimensional view of each media object defines a different orientation of each media object; and

means for building the virtual reality scene for display, wherein

the at least two media objects are included combined within the virtual reality scene, and the virtual reality scene is translatable and rotatable and includes data about each media object and a relationship of each media object to the scene including layering data to be used to determine foreground and background relationships between the media objects, and wherein translating and rotating the virtual reality scene results in changing the respective two-dimensional views of the media objects, including the layering of the media objects within the scene, to give the appearance of the media objects having three-dimensional qualities.

31. (Previously presented) The system of claim 30 further comprising:

means for receiving from a user a third request to manipulate the virtual reality scene; and

Inventor(s): Xiaochun Nie, et al. Examiner: Zhou, Ting Application No.: 10/022,151 - 9/29- Art Unit: 2173

means for manipulating the virtual reality scene.

32. (Previously presented) The system of claim 31 further comprising:

means for updating the translation vector and rotation matrix for each of the media objects responsive to the means for receiving from the user the third request to manipulate the scene.

33. (Previously presented) The system of claim 31 wherein the third request to

manipulate is one of a pan request, a zoom request, and a tilt request, and the

system further comprises:

means for panning;

means for zooming; and

means for tilting.

34. (Original) The system of claim 31 further comprising:

means for calling one or more library functions of a plurality of library functions to manipulate the media objects.

35. (Previously presented) The system of claim 34 wherein the library functions

are included in an operating system enhancement application program interface.

36. (Cancelled)

37. (Original) The system of claim 30 wherein each media object further

comprises:

- 10/29-

a soundtrack associated with each media object such that the soundtrack is to be played when the media object is selected by a user.

- 38. (Previously presented) The system of claim 37 further comprising:

 means for playing the soundtrack responsively to movement of the associated media object.
- 39. (Original) The system of claim 30 further comprising:
 means for receiving a designation of a soundtrack to be played in conjunction
 with the displaying of the scene.
- 40. (Original) The system of claim 39 further comprising: means for calling one or more library functions of a plurality of library functions to play the soundtrack.
- 41. (Original) The system of claim 30 wherein displaying comprises:

 means for calling one or more library functions of a plurality of library functions to display the media objects.
- 42. (Currently amended) A machine readable storage medium storing executable instructions which cause a processor to perform operations comprising:

receiving a first request to create a three-dimensional virtual reality scene; receiving a second request to add at least two media objects to the virtual reality scene, wherein each media object is two-dimensional;

Inventor(s): Xiaochun Nie, et al.

Application No.: 10/022,151

- 11/29
Examiner: Zhou, Ting

Art Unit: 2173

associating each media object with a series of two-dimensional views of the media object from various orientations and locations in three dimensional space;

preparing a translation vector and a rotation matrix for each of the media objects, the rotation matrix and the translation matrix defining an orientation and a location of each of the media objects in the virtual reality scene, wherein each two-dimensional view of each media object defines a different orientation of each media object;

building the virtual reality scene for display, wherein

the <u>virtual reality scene combines the</u> at least two media objects <u>and</u> includes data about each media object and a relationship of each media object to the scene including layering data to be used to determine foreground and <u>background relationships between the media objects</u> are included within the <u>virtual reality scene</u>, and

the virtual reality scene is translatable and rotatable, and wherein translating and rotating the virtual reality scene results in changing the respective two-dimensional views of the media objects, including the layering of the media objects within the scene to give the appearance of the media objects having three dimensional qualities.

43. (Previously presented) The machine readable storage medium of claim 42 wherein the processor performs further operations comprising:

receiving from a user a third request to manipulate the virtual reality scene; and

manipulating the virtual reality scene, wherein manipulating is at least one of

translating the virtual reality scene and rotating the virtual reality scene with respect to

at least one camera view.

44. (Previously presented) The machine readable storage medium of claim 43

wherein the processor performs further operations comprising:

updating the translation vector and rotation matrix for each of the media

objects responsive to receiving the third request to manipulate the scene.

45. (Previously presented) The machine readable storage medium of claim 43

wherein the third request to manipulate is one of a pan request, a zoom request, and

a tilt request.

46. (Previously presented) The machine readable storage medium of claim 43

wherein the processor performs further operations comprising:

calling one or more library functions of a plurality of library functions to

manipulate the media objects.

47. (Previously presented) The machine readable storage medium of claim 46

wherein the library functions are included in an operating system enhancement

application program interface.

48. (Previously presented) The machine readable storage medium of claim 42

wherein each media object further comprises:

a soundtrack associated with each media object such that the soundtrack is to

be played when the media object is selected by a user.

49. (Previously presented) The machine readable storage medium of claim 48

wherein the soundtrack is to be played responsively to movement of the associated

media object.

50. (Previously presented) The machine readable storage medium of claim 42

wherein the processor performs further operations comprising:

receiving a designation of a soundtrack to be played in conjunction with the

displaying of the scene.

51. (Previously presented) The machine readable storage medium of claim 50

wherein the soundtrack is to be played by calling one or more library functions of a

plurality of library functions.

52. (Previously presented) The machine readable storage medium of claim 42

wherein the displaying comprises:

calling one or more library functions of a plurality of library functions to display

the media objects.

53. (Currently amended) A machine readable storage medium storing executable

instructions which cause a processor to perform operations comprising:

storing a first function to allow an application program to create a threedimensional virtual reality scene, wherein the scene is to be able to be translated and rotated;

receiving a request for execution of the first function;

storing a second function to allow the application program to add at least two media objects, wherein each media object is two-dimensional, to the virtual reality scene and to associate each media object with a series of two-dimensional views of the object from various orientations and locations in three dimensional space, responsive to the request to execute the first function, wherein the virtual reality scene combines the media objects and includes data about each object and a relationship of each media object to the scene including layering data to be used to determine foreground and background relationships between the media objects, wherein each two-dimensional view of each media object defines a different orientation of each media object;

receiving a request for execution of the second function; and preparing a translation vector and a rotation matrix for each of the media objects, the rotation matrix and the translation matrix defining an orientation and a location of each of the media objects in the virtual reality scene responsive to the request to execute the second function, and wherein translating and rotating the virtual reality scene results in changing the respective two-dimensional views of the media objects, including the layering of the media objects within the scene, to give the appearance of the media objects having three dimensional qualities.

Inventor(s): Xiaochun Nie, et al. Examiner: Zhou, Ting Application No.: 10/022,151 - 15/29- Art Unit: 2173

54. (Previously presented) The machine readable storage medium of claim 53

wherein the processor performs further operations comprising:

providing a third function to render the virtual reality scene and the media

objects in the virtual reality scene;

receiving a request for execution of the third function; and

rendering the virtual reality scene responsive to receiving the request to

execute the third function.

55. (Previously presented) The machine readable storage medium of claim 54

wherein the processor performs further operations comprising:

receiving a request from a user to manipulate the scene.

56. (Previously presented) The machine readable storage medium of claim 55

wherein the processor performs further operations comprising:

updating the translation vector and rotation matrix for each of the media

objects responsive to receiving the request to manipulate the scene.

57. (Previously presented) The machine readable storage medium of claim 55

wherein the request to manipulate is one of a pan request, a zoom request, and a tilt

request.

58. (Previously presented) The machine readable storage medium of claim 55

wherein the processor performs further operations comprising:

calling one or more library functions of a plurality of library functions to

manipulate the media objects.

59. (Previously presented) The machine readable storage medium of claim 58

wherein the library functions are included in an operating system enhancement

application program interface.

60. (Cancelled)

61. (Previously presented) The machine readable storage medium of claim 53

wherein the series of views is captured by a camera rotated about a subject of the

media object.

62. (Previously presented) The machine readable storage medium of claim 53

wherein the series of views is captured by a camera directed at a rotated subject of

the media object.

63. (Previously presented) The machine readable storage medium of claim 53

wherein the series of views is determined algorithmically when the media object is

added to the virtual reality scene.

64. (Previously presented) The machine readable storage medium of claim 55

wherein the operations further comprise, in response to a request to navigate within

the virtual reality scene, replacing a displayed view of the media object in the scene

with a different view in the series of views based on the translation vector and rotation

matrix to reorient and relocate the object to match the navigation.

Examiner: Zhou, Ting Art Unit: 2173

- 17/29-

65. (Previously presented) The computer implemented method of claim 2 additionally comprising:

receiving a fourth request to build a camera view of the virtual reality scene, the camera view including the at least two media objects in the virtual reality scene; and

rendering the at least one camera view of the virtual reality scene.

66. (Previously presented) The machine readable medium of claim 43 wherein the processor performs further operations comprising:

receiving a fourth request to build a camera view of the virtual reality scene, the camera view including the at least two media objects in the virtual reality scene; and

rendering the at least one camera view of the virtual reality scene.

67. (Currently amended) A computer implemented method comprising:

receiving, by the computer, a first request to create a three-dimensional virtual reality scene, wherein the virtual reality scene is two-dimensional and associated with a series of two-dimensional views of the scene from various orientations or locations in three-dimensional space;

receiving a second request to add at least one media object to the virtual reality scene, wherein the media object is two-dimensional;

associating the media object with a series of two-dimensional views of the media object from various orientations and <u>or</u> locations in three dimensional space;

preparing a translation vector and a rotation matrix for the media object, the

rotation matrix and the translation matrix defining an orientation and a location of the

media object in the virtual reality scene, wherein each two-dimensional view of the

media object defines a different orientation of the media object and corresponds to a

two-dimensional view of the virtual reality scene;

building the virtual reality scene for display, wherein

the media object is included within the virtual reality scene, and the virtual

reality scene is translatable and rotatable, and wherein translating and rotating the

virtual reality scene results in changing the respective two-dimensional views of the

media object to give the appearance of the media object having three dimensional

qualities.

68. (Previously Presented) The computer implemented method of claim 67 further

comprising:

receiving a third request to manipulate the virtual reality scene; and updating

the translation vector and rotation matrix for the media object responsive to receiving

the third request to manipulate the scene.

69. (Previously Presented) The computer implemented method of claim 68

wherein the third request to manipulate is one of a pan request, a zoom request, and

a tilt request.

70. (Previously Presented) The computer implemented method of claim 67 further

comprising:

receiving a third request to manipulate the media object and updating the translation vector and rotation matrix for the media object responsive to receiving the third request to manipulate the media object.

71. (Previously Presented) The computer implemented method of claim 70 wherein the third request to manipulate is one of a pan request, a zoom request, and

a tilt request.

72. (Previously Presented) The computer implemented method of claim 67,

wherein the media object further comprises a soundtrack associated with the object

such that the soundtrack is to be played when the media object is selected by a user,

or in response to a movement of the media object.

73. (Currently amended) A machine readable storage medium storing executable

instructions which cause a processor to perform operations comprising:

receiving a first request to create a three-dimensional virtual reality scene,

wherein the virtual reality scene is two-dimensional and associated with a series of

two-dimensional views of the scene from various orientations or locations in three-

<u>dimensional space</u>;

receiving a second request to add at least one media object to the virtual

reality scene, wherein the media object is two-dimensional;

associating the at least one media object with a series of two-dimensional

views of the media object from various orientations and or locations in three

dimensional space;

preparing a translation vector and a rotation matrix for the media objects, the

rotation matrix and the translation matrix defining an orientation and a location of the

at least one media object in the virtual reality scene, wherein each two-dimensional

view of the at least one media object defines a different orientation of the at least one

media object and corresponds to a two-dimensional view of the virtual reality scene;

building the virtual reality scene for display, wherein the at least one media

object is included within the virtual reality scene, and the virtual reality scene is

translatable and rotatable, and wherein translating and rotating the virtual reality

scene results in changing the respective two-dimensional views of the at least one

media object to give the appearance of the at least one media object having three

dimensional qualities.

74. (Previously Presented) The computer implemented method of claim 73 further

comprising:

receiving a third request to manipulate the virtual reality scene; and updating

the translation vector and rotation matrix for the media object responsive to receiving

the third request to manipulate the scene.

75. (Previously Presented) The machine readable storage medium of claim 74

wherein the third request to manipulate is one of a pan request, a zoom request, and

a tilt request.

76. (Previously Presented) machine readable storage medium of claim 73 further

comprising:

receiving a third request to manipulate the media object and updating the

translation vector and rotation matrix for the media object responsive to receiving the

third request to manipulate the media object.

77. (Previously Presented) The machine readable storage medium of claim 76

wherein the third request to manipulate is one of a pan request, a zoom request, and

a tilt request.

78. (Previously Presented) The machine readable storage medium of claim 73,

wherein the media object further comprises a soundtrack associated with the object

such that the soundtrack is to be played when the media object is selected by a user,

or in response to a movement of the media object.

79. (Currently amended) A system comprising:

means for receiving a first request to create a three-dimensional virtual reality

scene wherein the virtual reality scene is two-dimensional and associated with a

series of two-dimensional views of the scene from various orientations or locations in

three-dimensional space;

means for receiving a second request to add at least one media object to the

virtual reality scene, wherein the at least one media object is two-dimensional;

means for associating the at least one media object with a series of twodimensional views of the object from various orientations and <u>or</u> locations in three dimensional space;

means for preparing a translation vector and a rotation matrix for the at least one media objects, the rotation matrix and the translation matrix defining an orientation and a location of each of the media objects in the virtual reality scene, wherein each two-dimensional view of each media object defines a different orientation of each media object and corresponds to a two-dimensional view of the virtual reality scene; and

means for building the virtual reality scene for display, wherein the at least two media objects are included within the virtual reality scene, and the virtual reality scene is translatable and rotatable, and wherein translating and rotating the virtual reality scene results in changing the respective two-dimensional views of the objects to give the appearance of the media objects having three-dimensional qualities.

Inventor(s): Xiaochun Nie, et al.

Application No.: 10/022,151

Examiner: Zhou, Ting

Art Unit: 2173